Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
	)	
Implementing a Nationwide, Broadband Interoperable Public Safety Network in the 700 MHz Band	)	PS Docket No. 06-229
	)	
	)	
Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010	)	WT Docket No. 96-86

To: The Commission

COMMENTS OF
GEOCOMMAND, INC.

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SUMMARY

The NPRM takes a comprehensive look at the needs of the public safety industry and proposes innovative solutions to the technical, interoperability and financial hurdles facing our first responders. The proposed utilization of a mere 12 MHz of existing public safety spectrum for the deployment of this nationwide broadband public safety network, however, constitutes a critical weakness in the FCC's proposal and threatens the realization of its laudable goals for public safety in this country.

First, the 12 MHz of spectrum proposed by the FCC for this network is needed for other public safety services. This spectrum has been promised to the public safety industry for nearly ten long years, and has been anticipated and designated by public safety for specific and long-documented needs. If the proposed 12 MHz of existing public safety spectrum is used for this proposal, it will deny spectrum to other equally meritorious services already contemplated by public safety. While the construction and operation of a nationwide broadband public safety network clearly will enhance public safety services in this country, it should not be at the expense of other public safety uses. GEOCommand urges the Commission to find additional spectrum for this proposal outside the existing public safety allocation, and leave undisturbed the 24 MHz of spectrum scheduled to become available to public safety in February 2009.

Second, GEOCommand questions whether 12 MHz of spectrum is sufficient to support the private/public partnership contemplated by the FCC. Funding for public safety is an ongoing challenge. Public safety entities are notoriously cash-strapped and often dependent upon government funding of some type. The FCC's proposal to implement a "private/public" partnership is potentially an effective vehicle for funding the construction and operation of the contemplated network. In order for such a partnership to succeed, however, a business case must

be made to ensure that the "private" entities in the partnership -- i.e., the commercial operators -- will make the necessary investments in the network.

There are several features in the FCC's proposal that raise concerns in this regard. First, given the priority access that public safety will have, GEOCommand questions whether a mere 12 MHz can support the combined commercial and public safety use on the network -- particularly given the broadband services at issue. As the spectrum will need to be "unconditionally preemptible" at any time by public safety, the less spectrum that is available at the outset, the more likely that commercial entities will not be able to justify the investment. Moreover, the additional costs associated with the contemplated public safety network -- nationwide coverage, increased reliability and redundancy, and ongoing maintenance and upgrade capability -- make the economic analysis (including access to sufficient spectrum) even more difficult. The allocation of a greater amount of spectrum will better ensure that the necessary economic incentives exist.

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Comments of GEOCommand, Inc.

GEOCommand, Inc. ("GEOCommand"), by its counsel, hereby submits these comments on the Ninth Notice of Proposed Rulemaking released by the Federal Communications Commission ("FCC" or "Commission") on December 20, 2006.[1] Among other things, the NPRM seeks comment on whether 12 megahertz of the current 24 megahertz of public safety spectrum in the 700 MHz band (764-776 MHz and 794-805 MHz) should be modified to accommodate broadband communications. Among other things, the FCC requests comment on its proposals to assign this spectrum nationwide to a single national public safety broadband licensee, and to permit the national licensee to provide "unconditionally preemptible" access to

[1] Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, Ninth Notice of Proposed Rulemaking, 21 FCC Rcd 14837 (2006) ("NPRM").

its assigned spectrum to commercial service infrastructure.[2] GEOCommand is pleased to comment on these proposals set forth in the NPRM.

I.

INTRODUCTION

A. The History Behind the NPRM

The FCC's adoption of the NPRM follows a proposal by Cyren Call Communications Corporation ("Cyren Call") seeking the reallocation of 30 MHz of commercial 700 MHz spectrum for use in a nationwide public safety network.[3] But while the NPRM substantially adopted the Cyren Call template for creation of this network,[4] it departed from the Cyren Call proposal in certain significant respects. First, the NPRM proposes far *less* spectrum -- 12 MHz as opposed to the 30 MHz contemplated by Cyren Call. In addition, the NPRM proposes to utilize spectrum from frequencies in the 700 MHz *already allocated for exclusive public safety use*. The Cyren Call proposal, on the other hand, proposed frequencies which are currently slated for auction and exclusive commercial use, although the proposed private/public partnership still ensured substantial commercial use of the proposed network.

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2 NPRM, at ¶ 4.

3 *Petition for Rulemaking*, filed by Cyren Call, April 27, 2006 ("Cyren Call Petition"). Cyren Call proposed to utilize the 30 MHz of spectrum at 747-762 and 777-792 MHz.

4 The Cyren Call Petition, for example, proposed the creation of a "Public Safety Broadband Trust," a single consolidated entity representing all public safety users of the public safety network. This Trust would lease the excess capacity of the reallocated 700 MHz spectrum to various commercial operators, who in turn, would fund and construct the network infrastructure in exchange for commercial use of the frequencies only during those times when the frequencies were not being used by the public safety industry. The Trust would further ensure that the national network was designed to public safety specifications, and require that the network reflect as a core design element an interoperability feature that ties together legacy local, state and federal systems, as well as those operated by members of critical infrastructure industries. The NPRM also envisions a single nationwide licensee and contemplates the formation of a private/public partnership with commercial entities to ensure construction of the system. In addition, the FCC has solicited comment on how best to ensure the interoperability of this network -- e.g., whether the standards should be decreed by the FCC or by the nationwide licensee.

The FCC solicited comment on Cyren Call's Petition,[5] but subsequently dismissed the Petition on the grounds that the Communications Act of 1934, as amended ("the Act") required the FCC to auction the spectrum for which Cyren Call was seeking reallocation and assignment and that, barring legislative action, it had no authority to act upon the Cyren Call proposal.[6] Because the proceeding remained "open," however, more than 1,300 (mainly supportive) comments were filed at the FCC by public safety entities and other parties interested in the Cyren Call Petition.[7]

As noted in GEOCommand's comments on the Cyren Call Petition, the concept of a nationwide, interoperable broadband public safety network is laudable and long overdue. Many of the features advanced in the Cyren Call Petition -- e.g., a private/public partnership model in order to facilitate funding and centralized equipment and technical requirements to ensure complete interoperability between different components of the network -- have similar application here. Accordingly, as with the Cyren Call proposal, GEOCommand supports those aspects of the FCC's proposal which endorse the need for a national broadband public safety

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5 Public Notice, Consumer & Governmental Affairs Bureau, Reference Information Center, Petitions for Rulemaking Filed, Report No. 2794, released October 30, 2006.

6 See, Reallocation of 30 MHz of 700 MHz Spectrum (747-762/777-792) MHz) from Commercial Use, "Order," RM No. 11348, DA 06-2278, released November 3, 2006 ("Cyren Call Dismissal Order"). In particular, the FCC noted that the Cyren Call proposal was inconsistent with Sections 337(a) and 309(j)(15)(C)(v) of the Act. Cyren Call Dismissal Order, at ¶2.

7 Cyren Call acknowledged that the spectrum it seeks has been designated to be auctioned for commercial purposes and stated its commitment to pursuing legislative relief to permit the grant of its Petition. Petition at vi, note 4. Indeed, since the filing of the Cyren Call Petition, (i) Senator John McCain has announced his intent to introduce legislation that would establish a new nationwide, state-of-the-art, interoperable public safety broadband network using the 30 megahertz of radio spectrum in the upper 700 MHz band currently slated for auction (*See* "Press Release from the office of Senator John McCain," released January 31, 2007) and (ii) the Senate Committee on Commerce, Science & Transportation held a February 8, 2007 hearing on "The Present and Future of Public Safety Communications," which, among other things considered the relative merits of the Cyren Call proposal and the FCC's NPRM.

network which is truly interoperable, and contemplate a private/public partnership to enable private funding for the construction of such a network.

With respect, however, the FCC's proposal to utilize a mere 12 MHz of spectrum already allocated to public safety for this endeavor seriously undermines the successful construction and operation of a national broadband interoperable public safety network. And while the FCC has observed that, without Congressional intervention, it has no choice but to consider existing public safety spectrum for this proposal,[8] GEOCommand believes that it would be more harmful to attempt to implement a much needed national broadband interoperable public safety network without incorporating the very tools needed to ensure its success -- that is: a sufficient amount of spectrum other than the spectrum already needed to meet existing public safety needs. The allocation of 12 megahertz of spectrum simply is not enough to support the contemplated commercial *and* public safety use of the network.

B. The Current Public Safety Environment

Consideration of any proposal to improve public safety telecommunications services must include a review of the current regulatory and practical environment for those services. Over the past several years, certain momentous events have highlighted deficiencies in public safety services. In particular, the performance of public safety services during emergencies, such as the September 11, 2001 airplane highjackings or Hurricane Katrina in 2005, reflected systematic problems inhibiting the efficient and effective provision of first responder services.[9]

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[8] See *Statement of Chairman Kevin J. Martin* (accompanying the NPRM): "The question of how the nation's spectrum resources in the 700 MHz band should be allocated is ultimately a question for Congress, not the Commission. If Congress determines that additional spectrum resources in the 700 MHz band should be allocated to public safety, the Commission would implement that determination."

[9] See, e.g., The 911 Commission Report: Final Report of the National Commission on Terrorist Attacks Upon the United States, at 396 (2004)("The inability to communicate was a critical element at the World Trade Center, Pentagon, and Somerset County, Pennsylvania crash sites, where multiple

Many of these problems are associated with a lack of interoperability among existing public safety systems -- a state brought about by piecemeal spectrum allocation for public safety services[10] and by the deployment of incompatible equipment by public safety systems.[11] As a result, these systems simply cannot communicate with each other at the very times when effective and prompt communications are most vital.[12]

Currently, more than 97 MHz of spectrum is allocated in support of public safety services,[13] although it is generally acknowledged that the total amount of spectrum currently utilized by public safety is approximately 47 MHz.[14] Historically, these allocations have been

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agencies and jurisdictions responded. The occurrence of this problem at three very different sites is strong evidence that compatible and adequate communications among public safety organizations at the local, state and federal levels remain an important problem."); State Improving Interoperability Among First Responders: Government Establishes Panel to Direct Creation of Statewide System, at 1 (2006)("What we experienced in Katrina was not a failure to communicate, but an inability to communicate.").

[10] For example, current public safety allocations can be found at 25-50 MHz (VHF Low Band), 150-174 MHz (VHF High Band), 220-222 MHz (220 MHz band), 450-470 MHz (UHF band), 764-776/794-806 MHz (700 MHz band), 806-821/851-866 (800 MHz band), 821-824/866-869 (NPSPAC band) and 4940-4900 MHz (4.9 GHz band). See, *Report to Congress on the Study to Assess the Short-Term and Long-Term Needs for Allocation of Additional Portions of the Electromagnetic Spectrum for Federal, State and Local Emergency Response Providers*, WT Docket No. 05-157 at pp. 4-5 (December 16, 2005)("Public Safety Needs Report").

[11] Even if first responders have equipment that operates in the same frequency bands, such systems typically have different receiver standards, modulation techniques, and/or encryption schemes.

[12] One definition of "interoperability" is set forth in Section 90.7 of the Commission's Rules, 47 C.F.R. §90.7, in which the FCC describes interoperability as "[a]n essential communications link within public safety and public service wireless communications systems which permits units from two or more different entities to interact with one another and to exchange information according to a prescribed method in order to achieve predictable results."

[13] Public Safety Needs Report, at pp.4-5.

[14] This number excludes 50 MHz of spectrum drawn from the 4.9 GHz band with more limited applications. See "Testimony of Harlin R. McEwen," before the Senate Committee on Commerce, Science & Transportation in a hearing on Current and Future Public Safety Communications, February 8, 2007, p. 4 ("McEwen Testimony"). Even the Cellular Telecommunications Industry Association (CTIA), the trade association representing commercial wireless interests and opposed to the allocation of additional spectrum for the contemplated nationwide broadband network, agrees with this 47 MHz

for individual channels rather than contiguous channel blocks. In addition, the channels allocated to public safety typically are characterized by no more than 25 kHz of bandwidth. As a result, existing allocations have been unable to accommodate broadband services.

The proposal for a nationwide broadband, interoperable public safety network in the 700 MHz band recognizes many of these systemic problems and attempts to correct them by proposing measures to better ensure the deployment of a centralized, more uniform, ubiquitous and interoperable public safety system capable of providing broadband services.[15] The FCC's proposal also contemplates the use of contiguous spectrum to accommodate the broadband services. Unfortunately, however, as will be discussed below, the amount of spectrum proposed for such a network simply is not sufficient to fully realize the goals of the public and the FCC for a fully functioning, effective nationwide interoperable broadband public safety network.

C. GEOCommand's Interest In This Proceeding

Before commenting on the FCC's proposals, it may be helpful to describe GEOCommand's interest in this proceeding in order to understand GEOCommand's relation to the public safety industry. GEOCommand's business is focused squarely on first responders and its interest is in promoting plans to enhance the capabilities of these responders in the most efficient and effective manner. In essence, GEOCommand is an advanced mapping data and

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figure. See *CTIA Press Release*, January 31, 2007. Total commercial spectrum allocations, by contrast, amount to at least 528 MHz of spectrum (cellular – 50 MHz; broadband PCS – 120 MHz; AWS – 90 MHz; broadband radio services – 190 MHz; Lower 700 MHz – 48 MHz; and Upper 700 MHz – 30 MHz). McEwen Testimony, at p. 4.

[15] This is not to say that narrowband services do not play a critical role in public safety services. Indeed, GEOCommand believes that narrowband systems should comprise an essential component of any comprehensive public safety strategy. Clearly, a wide variety of critical information can be conveyed via narrowband services to first responders. And while the deployment of broadband services can enhance the degree of information available to first responders and ensure greater interaction with such information during emergencies, they should not be the exclusive purveyors of public safety services. The most effective course would be to pursue a layered strategy that incorporates and coordinates multiple components, including narrowband and broadband services.

information tool. It provides first responders with advanced GIS mobile mapping solutions, making available the timely data needed for critical field decisions.[16] GEOCommand's mobile geographic information system can be integrated with global positioning systems, computer aided dispatch and other mobile computing devices, with the ability to integrate with various communications technologies, including both the internet and wireless.[17] As a result, GEOCommand provides first responders with valuable information to enable them to respond to emergency situations and provide their services in a safe and efficient manner.

Many GIS systems display spatial information in the tabular format of a database, which can be difficult to interpret. GEOCommand's display, by contrast, is visual, with spatial data viewed in layers that combine to form an immediately understandable model of the real world. GEOCommand's first layer consists of visible geography: building footprints, pavement edges, bodies of water, and land formations. This information can be superimposed on an aerial photographic background. Second and third layers display the invisible geography: utilities, zoning, parcels, and special districts (fire, police, school, historic, voting, etc.). GEOCommand

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[16] GEOCommand provides its equipment and software to various first responders, including in particular, fire companies, police departments, utility companies, airports, nuclear facilities, emergency medical units, bridge and tunnel authorities and at all levels of government. GEOCommand software has been used by the Los Alamos National Lab and the City of Roseville, California. The City of Worcester, Mass. Fire Department is evaluating a preliminary release of the new revision and is scheduled to be a beta-test participant in the spring.

[17] A geographic information system, or GIS, is a computer application that can capture, store, analyze, and display geographically referenced information. Most emergency-related information contains a location reference, placing the information at some point on the globe. The power of a GIS comes from its ability to link, or integrate, pieces of information that are difficult to associate in any other way. For example, a GIS can combine information from different sources – maps, pre-plans, hydrant records, land records, and aerial photography – to display a road map that includes building information, water sources, topography, and visual images of the area surrounding an emergency. A GIS can analyze this information to provide visual data that includes driving directions, fall-back zones, and hazmat warnings.

believes that its technology can ensure wireless connectivity capabilities at several frequencies currently in use by public safety and homeland security agencies.

In its recent Report to Congress regarding the needs of federal, state and local emergency responders, the Commission emphasized that "emergency response providers would benefit from the development of an integrated, interoperable nationwide network capable of delivering broadband services throughout the country."[18] The FCC noted several critical services potentially available via such a broadband network:[19] (i) delivery of rapid warnings and messages pertaining to criminal activity, including AMBER Alerts; (ii) video surveillance during emergency incidents; (iii) real-time text messaging and e-mail; (iv) delivery of high resolution digital images; and (v) the ability to obtain location and status information of personnel and equipment in the field. GEOCommand's service falls squarely within the scope of these contemplated services and will significantly boost the capabilities of first responders in the field.

II.

DISCUSSION

In the NPRM, the FCC has made a serious effort to fashion a comprehensive plan to implement a nationwide broadband network. Spectrum drawn from the 700 MHz band is particularly well-suited for this task from a technical perspective. Its propagation characteristics ensures broad coverage from a single transmitter, which in turn, better serves the public safety industry by providing the best coverage at the most efficient cost. The 700 MHz spectrum proposed by the FCC also comprises a single contiguous block, thus better enabling the

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18 Public Safety Needs Report, at p. 3.

19 Public Safety Needs Report, at p. 14.

provision of more advanced broadband services. Moreover, upon the vacating of this spectrum by the broadcasting industry, the 700 MHz spectrum proposed by the FCC will be unencumbered and thereby avoid the thorny issue of relocating incumbent licensees.[20] Unfortunately, however, the proposed allocation of a mere 12 megahertz of spectrum from the 24 MHz of spectrum already allocated to public safety -- while admittedly contiguous -- seriously undercuts the chances that the proposed network will succeed and potentially adversely affects other public interest services already contemplated for the spectrum at issue.

A. The 12 Megahertz Of Spectrum Contemplated By The FCC Is Needed For Other Public Safety Services.

Nearly a decade ago, the FCC promised 24 MHz of spectrum to the public safety industry -- a promise that will be realized only in February, 2009 when this spectrum will be vacated by the broadcasting industry.[21] This 24 MHz of spectrum was intended to address the unmet needs and identified deficiencies in the spectrum resources available to public safety at that time.[22] Currently, this spectrum is subdivided into various categories designed for mission critical voice communications on both local and state levels, as well as for wideband data applications.

Since this decade-old promise of additional spectrum for public safety, advances in technologies have enabled the industry and the FCC to contemplate enhanced new services critical to improving public safety generally. The FCC's focus on a national broadband network

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20 See Balanced Budget Act of 1997, Pub. L. No. 105-33, ¶ 3004, 111 Stat. 252 (1997), codified at 47 U.S.C. § 337(a)(1); Reallocation of Television Channels 60-69, the 746-806 MHz Band, ET Docket No. 97-157, *Report and Order*, 12 FCC Rcd 22953 (1997).

21 Id.

22 See Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communication Requirements Through the Year 2010, Establishment of Rules and Requirements for Priority Access Service, *First Report and Order and Third Notice of Proposed Rulemaking*, WT Docket No. 96-86, 14 FCC Rcd 152, ¶ 2 (1998).

capable of fully interoperable services, including the ability to obtain location and status information of personnel and equipment in the field, is one such advancement. This does not mean, however, that the existing contemplated use of the spectrum is not equally important and worthy of spectrum allocation. Indeed, fire and police departments already have spent time and resources in planning for building communications systems utilizing this new spectrum based on projected use of the spectrum long since determined.

Given the small amount of spectrum allocated to public safety relative to commercial allocations,[23] it should not be a question of choosing one type of service over the other. Rather, the solution should be the allocation of additional spectrum not already slated for other public safety use.

B. A Mere 12 Megahertz Of Spectrum Is Insufficient To Support A Vibrant Public/Private Partnership.

Historically, public safety entities have faced financial hurdles in the construction and operation of effective public safety systems and face a significant hurdle here. The FCC acknowledged this fact when it observed in its 2005 Public Safety Needs Report that –

> [P]ublic safety entities would require adequate funding resources in order to deploy broadband communications systems. Without adequate funding -- to purchase equipment and conduct the associated training and coordination -- it is likely that public safety would be unable to implement a nationwide, interoperable broadband network. In addition, absent adequate funding, cash-strapped public safety entities could implement broadband systems that are less capable and efficient and do not include a nationwide interoperable feature, which could create gaps in a nationwide system.[24]

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[23] In contrast to the relatively limited spectrum made available to public safety, commercial spectrum allocations to date total approximately 528 MHz, including allocations for cellular service (50 MHz), broadband PCS (120 MHz), the recently auctioned advanced wireless services (90 MHz), broadband radio services (190 MHz), the lower 700 MHz (48 MHz), and the upper 700 MHz (30 MHz).

[24] Public Safety Needs Report, at p. 15.

The NPRM seeks to address this problem with its proposed creation of a public/private partnership for the construction and operation of a nationwide, interoperable broadband network, and requests comment on whether the public safety community could leverage the expected build-out of a nationwide interoperable broadband network in the 700 MHz band by leasing "excess capacity" to commercial providers.[25]

In order for this concept to work, however, a strong business case must be made to the commercial operators to make the necessary investment. According to the FCC's proposal, these commercial operators would fund and construct the network, in exchange for presumptive access to whatever capacity is not being utilized by public safety. The needs of the public safety industry would be assured by the absolute, unfettered right of the national licensee to "unconditionally preempt" the commercial operators use of the spectrum in order to satisfy its requirements at any point in time.

This public/private partnership, while innovative in the public safety context, has some precedent in FCC licensing. Early examples of such a partnership can be found, for example, in the development of Instructional Television Fixed Radio ("ITFS"), now known as Educational Broadband Service ("EBS") spectrum in the 2.5 GHz band.[26] This spectrum, targeted for educational use, was primarily funded and constructed by commercial entities, who then leased the excess capacity of such spectrum for commercial use. The excess capacity lease agreements, pursuant to FCC rule requirements, preserved the capacity reserved for educational use, with specifications of educational programming to be provided for certain minimum hours on certain

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25 NPRM at ¶ 43.

26 See, e.g., In the Matter of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands, 19 FCC Rcd 14165, 14171-14176.

days and times.[27] More recently, the partnership resulting from the leasing of spectrum has expanded through the Secondary Market proceeding orders, permitting the commercial lessees to control more aspects of the spectrum being developed, while still recognizing the status of the FCC licensees.[28]

Critically, however, in the EBS context, the commercial operators lease EBS channels equal to *at least 22.5 MHz of spectrum* (from a single 4-channel EBS licensee in a given market) and *potentially 112.5 MHz of spectrum* (if the operator leases from all five 4-channel EBS licensees in a given market). Moreover, the commercial operator can lease *all* of the capacity of the commercial broadband radio operators in the market, *adding up to 73.5 MHz of spectrum to the EBS leased spectrum* for the proposed system. As a result, even taking into account minimum reservations for educational use, the total spectrum available for commercial purposes is substantial, making a far more persuasive business case for investing in the EBS licensees' infrastructure.

The business case for commercial operators being asked to fund construction and maintenance of a proposed 700 MHz national broadband public safety network is considerably

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[27] Once digital technology is incorporated, the mandated educational use for the frequencies is more flexible. Specifically, (i) at least 5% of the overall digital capacity may not be leased and must be deployed for educational use; and (ii) the EBS licensee must reserve at least 20 hours of the leased capacity per day per licensed channel for educational use (although these minimums have no time of day restrictions and can be loaded onto any of the channels, thereby freeing the remaining channels entirely for commercial use). See 47 C.F.R. §§27.1203(b) & (c); 27.1214(b). Even with these EBS reserves, however, the excess capacity available for the commercial operator is vastly more than would be available in the proposed 12 MHz nationwide network, and the contemplated broadband services to be provided requires far more spectrum than that.

[28] Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, WT Docket No. 00-230, *Report and Order and Further Notice of Proposed Rulemaking,* 18 FCC Rcd 20604 (2003; Erratum, 18 FCC Rcd 24817 (2003); *Second Report and Order, Order on Reconsideration, and Second Further Notice of Proposed Rulemaking*, 19 FCC Rcd 17503 (2004). Under these new de facto control lease models, the spectrum lessee is encouraged to make more substantial capital investments in the system networks, as its interests are better served through greater control of the leased spectrum.

different. First, priority access at all times to the *entire* 12 MHz of spectrum by public safety must be preserved -- a requirement that is supported by the FCC's insistence that any commercial use be "unconditionally preemptible" by the national public safety licensee.[29] In the event of an emergency or any other perceived need by public safety, therefore, *all access of the spectrum by commercial interests could be preempted.* Moreover, a certain portion of proposed spectrum will likely be utilized at all times by public safety entities in any event. Certain services critical to the FCC's vision of a comprehensive public safety system encompass "always on" types of services, such as nuclear or hazardous materials sensor networks, which constantly monitor the presence of threatening substances.

Second, the costs associated with constructing the contemplated nationwide interoperable broadband public safety network are uniquely considerable. By its very nature, public safety systems have special requirements. The proposed network must reach into all areas of the country, including rural communities which are generally considered to be high cost, low density areas.[30] The sites needed for the proposed network will likely number into the tens of thousands. Further, public safety agencies require their communications systems to be built to significantly higher standards of reliability and redundancy than are the norm in commercial networks. Ongoing operational/maintenance and upgrade costs to ensure that the

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[29] NPRM at ¶ 41. The FCC also suggested that the nationwide public safety licensee should be completely independent of any commercial influence, including a bar on any commercial interest in the management of the licensee. NPRM at ¶ 27. While GEOCommand appreciates the FCC concern in this regard and largely agrees with it, the licensee should be able to hire a third party manager -- even if it is commercially owned -- in order to obtain the necessary expertise to assist in the operation of the network. Such manager, of course, should have no ability to dictate to the licensee on any aspects of commercial use of the system..

[30] It also should be noted that commercial operators would not likely build out these areas without being required to by public safety. In fact, CTIA indicated as much in the testimony of its president before the Senate Committee on Commerce, Science & Transportation in a hearing on Current and Future Public Safety Communications on February 8, 2007.

network remained state-of-the-art also would require a continuing financial commitment by the commercial operators.

Given that (i) there is no minimum assured amount of spectrum available to the commercial operator and (ii) the costs associated with the contemplated public safety network are considerable, the overall amount of spectrum at issue becomes even more important if the commercial operator is going to be able to make a business case to support its investment. Frankly, it is doubtful whether a mere 12 MHz of spectrum -- less the spectrum needed by public safety on a continuous basis -- would be sufficient for this purpose.[31] The private/partnership concept is a good one. But in order for it to work, the FCC must allocate sufficient spectrum to a nationwide interoperable broadband public safety network to ensure that commercial operators will feel vested in the network and participate on a true partnership basis.

III.

CONCLUSION

The NPRM takes a comprehensive look at the needs of the public safety industry and proposes innovative solutions to the technical, interoperability and financial hurdles facing our

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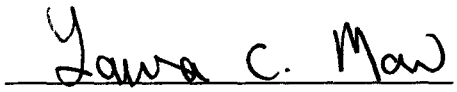
[31] Of course, the Cyren Call proposal, which contemplated 30 MHz of spectrum for the proposed network, has drawn the ire of commercial operators because it proposes that the spectrum be taken from the upper portion of the 700 MHz currently slated for exclusive commercial use and auction. Interestingly, the High Tech DTV Coalition (comprised of commercial companies and industry associations, including Verizon Wireless and T-Mobile, who are focused on innovating and developing broadband networks and services) has publicly stated that the economics of the Cyren Call public/private partnership proposal are "fundamentally flawed" and "would not attract the interest from commercial wireless operators." Mobile Radio Technology Magazine, "Coalition: Wireless Carriers Won't Subsidize Cyren Call Proposal," February 9, 2007. At the same time, this Coalition apparently expressed support for the public/private network concept, and in particular the one being proposed by the FCC in the NPRM, suggesting (according to this article) that "commercial operators would welcome an opportunity to utilize public-safety spectrum, which would help government entities raise money to pay for first-responder networks." Id. As both proposals contemplate a similar nationwide broadband public safety network -- one with substantially more spectrum available to commercial interests than the other -- it is difficult to see how investment in the network with *less* spectrum appears economically justified, while the economics of the private/public partnership for the network with greater spectrum is "fundamentally flawed."

first responders. The proposed utilization of a mere 12 MHz of existing public safety spectrum for the deployment of a nationwide broadband public safety network, however, constitutes a critical weakness in the FCC's proposal and threatens the realization of its laudable goals for public safety in this country. For the reasons above, GEOCommand supports the FCC's pursuit of a nationwide broadband interoperable public safety network and many of the proposed features of such a network, but is concerned that the specific spectrum contemplated does not adequately support the FCC's goals. GEOCommand encourages the FCC to continue consideration of such network, however, utilizing sufficient spectrum not already allocated to public safety.

Respectfully submitted,

GEOCOMMAND, INC.

By: 

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